

PREVO, A., kand.biol.nauk; SHAFROV, V.

Improving the taste of poultry. Mias. ind. SSSR 29 no.2:19 '58.  
(MIRA 11:5)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut ptitsepererabatyvayushchey promyshlennosti (for Prevo). 2.Bratsevskaya ptitsefabrika (for Shatrov).

(Poultry)

SHAFROV, V.G.; TUROV, Ye.A.

Galvanomagnetic effects in ferrimagnetics near the compensation point. Zhur. eksp. i teor. fiz. 45 no.2:349-352 Ag '63.

(MIRA 16:9)

1. Institut fiziki metallov AN SSSR.

(Ferrimagnetism)

SHAFRAGONA, L.M.

Life-forms and morphogenesis of *Potentilla fruticosa* L. under  
various conditions of growth. Biul. MOIP. Otd. biol. 69 no.4:  
101-110 J1-Ag '64. (MIRA 17:11)

9(4)

PHASE I BOOK EXPLOITATION 309/1778

Mashinotekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Moskovskoye pravleniye  
Transistornaya elektronika v priborostroyeni, sbornik trudov konferentsii (Transistor Electronics in the Instrument-making Industry. Collection of Conference Transactions) Moscow, Gornostel, 1959. 289 p. 1,400 copies printed.

Ed.: M.I. Chistyakov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: S.D. Khametov; Tech Ed.: V.P. Koshin; Managing Ed.: A.S. Zaynovskaya, Engineer.

PURPOSE: The book is intended for scientific and engineering personnel of the instrument-making and radio industries engaged in the development of electronic and radio equipment.

COVERAGE: The authors of this collection of articles discuss the theory, principle of operation, calculation and application of electronic circuit using transistors. They also describe transistor application in measuring circuits, computers, radio and automatic and remote control circuits. The book is based on transactions of the Scientific and Engineering Conference organized by NTU in Moscow in December 1956. The conference discussed 54 papers on transistors, photocells, thermocouples, cooling elements, nonlinear capacitors, crystal diodes, cooling elements, considerable number of these papers have been included in the present book. No personalities have been mentioned. References appear at the end of each article.

TABLE OF CONTENTS:

A.I. Baitan, A.A. Petrovsky, A. Ya. Makrasovskiy, Engineers. New Relay for Signalling and Control  
The authors discuss the construction and  
Card 9/12

238

Operation of the RMT-2 electronic relay used in control systems of coal mines. The relay uses RMT-26 crystal diodes and FSA or FSV transistors. There are no references.

E.M. Mitrova, A.I. Pivovarov, Engineers. Experience in the Development of Photoelectric Relays Using Relays

The authors describe the construction and operation of RMT-10 and RMT-11 photoelectric relays using vacuum-type triode transistors and discuss relay characteristics and constructional features. The relays were developed at the laboratory of Elektallurgmashinostroyeni. There are no references.

243

SHAFTAN, B. I.

Journal of Applied Chemistry  
June 1954  
Industrial Inorganic Chemistry

3  
1. Mass production of cast steel parts. S. I. Bernshtein, V. R. Balinskii, and B. I. Shaftan (*Litseinie Proizvodstvo*, 1953, 3, No. 3, 2-5).—Problems involved in the mass production of corrosion-resisting steel castings for high-pressure work are considered. The steel used contained Mn > 1.5, Cr 17-19, Ni 8-9.5, and Ti > 0.8%. Special attention is devoted to variations in Si and Ti contents during acid melting and casting. Mechanical properties of cast specimens of different shapes are compared, and the influence of Ti on these properties is illustrated. Results of corrosion and intercryst. corrosion tests on cast specimens show the decisive influence of Ti. J. IRON STEEL INST. (R.B.C.).

VINOKUR, D.Ya.; SHAFTAN, R.B.

Improve the selection of silk fabrics. Tekst. prer. 19 no.5:77-79  
My '59. (MIRA 12:10)

(Textile fabrics) (Synthetic fabrics)

VINOKUR, D.Ya.; SHAFTAN, R.B.

Improving the selection and quality of staple fiber fabrics.  
Tekst. prom. 19 no.6:75-76 Je '59. (MIRA 12:9)  
(Textile fabrics)



S/056/60/039/005/007/051  
B029/B077

AUTHORS: Vasil'yev, S. S., Shaftvalov, L. Ya.

TITLE: The  $\beta^+$  Spectrum of  $\text{Si}^{27}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 5(11), pp. 1221 - 1223

TEXT: The authors investigated the  $\beta^+$  spectrum of  $\text{Si}^{27}$  using a  $\beta$ -spectrometer with a magnetic lens.  $\text{Si}^{27}$  was obtained by the reaction  $\text{Al}^{27}(\text{p}, \text{n})\text{Si}^{27}$  in the 120-cm cyclotron of NIIYaF MGU (Scientific Research Institute of Nuclear Physics, Moscow State University). The proton beam emitted by the cyclotron was focused by quadrupole lenses and hit the target which was placed 9 m away from the cyclotron behind a concrete shield. Before hitting the target the protons passed through a screen connected to an integrator. The aluminum target consisted of a  $2.7 \text{ mg/cm}^2$  thick rotating ring. This arrangement brought the irradiated parts of the target into the focus of the  $\beta$ -spectrometer, and using a

Card 1/3



The  $\beta^+$  Spectrum of  $\text{Si}^{27}$

S/056/60/039/005/007/051  
B029/B077

suitable rotation velocity it was possible to move the radioisotopes into the focus of the  $\beta$ -spectrometer with the wanted half-life. A strong background complicated the measurements considerably. The Fermi chart shows that the  $\beta^+$  spectrum of  $\text{Si}^{27}$  consists of two partial spectra. The upper limit of the fundamental  $\beta^+$  spectrum is  $3.65 \pm 0.05$  Mev, and its relative intensity is  $\sim 90\%$ . The upper limit of the weaker  $\beta^+$  spectrum is  $1.45 \pm 0.1$  Mev, and its relative intensity is  $< 10\%$ . The decay scheme found in the book of B. S. Dzhelepov and L. K. Peker (Ref.5) yields a level of 2270 kev in Al if a partial  $\beta^+$  spectrum with an upper limit of  $1.45 \pm 0.1$  Mev is added. This level is observed when investigating inelastic scattering. It has a positive parity and a  $5/2$  spin like the ground state of the  $\text{Si}^{27}$  nucleus. Therefore, the  $\beta$ -transition that leads to this level is more probable than transitions leading to other states of  $\text{Al}^{27}$ . The half-life of  $\text{Si}^{27}$  was calculated to be  $4.1 \pm 0.4$  sec and agrees with the known value within the limits of error. Finally, the method of half-life determination is briefly described. The authors thank the cyclotron team and

Card 2/3

The  $\beta^+$  Spectrum of  $\text{Si}^{27}$

S/056/60/039/005/007/051  
B029/B077

especially Yu. A. Vorob'yev, Z. I. Tikhomirova, B. M. Makuni, and N. S. Kirpichev for their cooperation, and also B. S. Zazulin for calculating the half-life. There are 3 figures and 6 references: 2 Soviet, 3 US, and 1 Canadian.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics, Moscow State University) ✓

SUBMITTED: June 23, 1960

Card 3/3

3114...  
 MERLIN, V.S.; MARTYNOV, D.Ya., otvetstvennyy redaktor; MARKOV, M.V., professor, redaktor; SHAFUGULLIN, A.G., professor, redaktor; ARBUZOV, B.A., professor, redaktor; DYUKOV, I.A., professor, redaktor; NORDEN, A.G., professor, redaktor; PISAREV, V.I., professor, redaktor; TIKHVINSKAYA, Ye. I., professor, redaktor; ABDRAKHMANOV, M.I., dotsent, redaktor; MOROZOV, D.G., dotsent, redaktor; KHARITONOV, A.P., dotsent, redaktor; KOLOBOV, N.V., redaktor; KOLESNIKOVA, Ye.A., starshiy prepodavatel', redaktor; ROZHDESTVENSKIY, B.P., dotsent, redaktor.

[Peculiarity of conditioned reactions in the structure of a voluntary act] Svoebrazie uslovykh reaktsii v strukture volevogo akta. Kazan', 1953. 123 p. (Kazan. Universitet. Uchenye zapiski, vol.113, no.3)

(MIRA 10:3)

1. Rektor universiteta (for Martynov); 2. Proroktor po nauchnoy rabote (for Markov); 3. Proroktor po uchebnoy rabote (for Shafugullin); 4. Sekretar' partbyuro universiteta (for Kolobov)
- (CONDITIONED RESPONSE) (WILL)

MADANOV, P.V.; MARTYNOV, D.Ya., otvetstvennyy redaktor; MARKOV, M.V., professor, redaktor; SHAFUGULLIN, A.G., professor, redaktor; ARBUZOV, B.A., akademik, redaktor; DYUKOV, I.A., professor, redaktor; NORDEN, A.P., professor, redaktor; PISAREV, V.I., professor, redaktor; TIKHVINSKAYA, Ye.I., professor, redaktor; ABDRAKHMANOV, M.I., dotsent, redaktor; MOROZOV, D.G., dotsent, redaktor; KHARITONOV, A.P., dotsent, redaktor; KOLOBOV, N.V., redaktor; KOLESNIKOVA, Ye.A., starshiy prepodavatel', redaktor; VINOKUROV, M.A., professor, redaktor.

[Biological accumulation of manganese in soils of the Volga-Kama forest-steppe and its availability to plants] Biologicheskaya akumulatsiya margantsa v pochvakh Volzhsk-Kamskoi lesostepi i ego dostupnost' sel'skokhoziaistvennym rasteniyam. Kazan', 1953. 202 p. (Kazan, Universitet. Uchenye zapiski, vol.113, no.7) (MIRA 10:3)

1. Rektor universiteta (for Martynov). 2. Prerektor po nauchnoy rabote (for Markov). 3. Prerektor po uchebnoy rabote (for Shafugullin)
  4. Sekretar' partbyuro universiteta (for Koleshev).
- (Plants, Effect of manganese on)  
(Volga Valley--Forest soils)

SHUCHUNOV, V. A., ZHURKOV, A. I.

Calcium Hydride

Kinetics of formation of calcium hydride. Zhur. fiz. khim., 26, No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

SHAG, I. F.

Shag, I. F. -- "Application of the Artanov System of Automatic Levelling Instruments for Railroad Surveys." Min Transport Building USSR, All-Union Sci Res Inst of Railroad Construction and Planning, Moscow, 1955 (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No. 23, Moscow, Jun 55, pp 87-104

SHAGA, V.S.

Young naturalists study the nature of their homeland. Biol. v.  
shkole no.4:61-62 J1-Ag '63. (MIRA 16:9)

1. Vos'miletnyaya shkola No.44, Khabarovsk.  
(Khabarovsk Territory---Nature study)



SHAGA, V.S.

New floral finds in the central Sikhote-Alin' Range.

Bot.zhur. 50 no.11:1623-1625 N '65.

(MIRA 19:1)

1.Dal'nevostochnyy nauchno-issledovatel'skiy institut  
lesnogo khozyaystva, Khabarovsk. Submitted March 25, 1964.

DIOMIDOV, A. P., dotsent; MELKIKH, V. I., inzh.; VOLEGOV, A. V., inzh.;  
SHAGABUTDINOV, G. N., starshiy prepodavatel'

Estimation of the work efficiency of drum screens employed in  
classifying asbestos concentrates. Izv. vys. ucheb. zav.;  
gor. zhur. 5 no.8:169-175 '62. (MIRA 15:10)

1. Sverdlovskiy gornyy institut imeni Vakhrusheva. Rekomendovana  
kafedroy obogashcheniya poleznykh iskopayemykh.

(Screens(Mining)) (Asbestos)

SKORODUMOV, V.A.; SHAGAKO, N.K.; ZHURAVLEV, S.V.

Synthesis in the phenothiazine series. Part 13: Selective reduction of  
10-methyl-3-nitro-5-oxidophenothiazine. Zhur.ob.khim. 34 no.2:621-623  
F. '64. (MIRA 17:3)

MATLINA, E.A.; SHAGAL, D.I. (Moskva)

Effect of ACTH on adrenaline and noradrenaline excretion in  
the urine in myopathy. Probl. endok. i gorm. 9 no.5:66-70  
S-O '63 (MIRA 16:12)

1. Iz laboratorii neyro-gumoral'noy regulyatsii (zav. - chlen-  
korrespondent AN SSSR N.I.Grashchenkov, rukovoditel' problemy  
prof. G.N.Kassil') Instituta vysshey nervnoy deyatel'nosti i  
neyrofiziologii AN SSSR.

IL'INA, N.A.; SHAGAL, D.I.

Diencephalic disorders in myopathy. Zhur. nevr. i psikh. 63  
no.8:1133-1138 '63. (MIRA 17:10)

1. Klinika nervnykh bolezney (zav. - prof. V.V. Mikheyev) I.  
Moskovskogo ordena Lenina meditsinskogo instituta i laboratoriya  
neyro-gumoral'noy regul'yatsii (zav. - chlen-korrespondent AN SSSR  
N.I. Grashchenkov) Instituta vysshey nervnoy deyatel'nosti i neyro-  
fiziologii AN SSSR, Moskva.

L 25167-65

ACCESSION NR: AP5005772

S/0219/64/058/010/0003/0008

AUTHOR: Pratushevich, Yu. M.; Shagal, D. I.

TITLE: Dynamics of reactive potentials of the brain and biologically active substances of the blood in children subjected to cold

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 58, no. 10, 1964, 3-8

TOPIC TAGS: human physiology, blood, nervous system

Abstract: The dynamics of the electrical reactivity of the brain and biologically active substances in the blood of 13-15 year-olds was studied in combination with the reflex effect of a cold stimulus on the skin receptor for one minute. The cold stimulus caused some decline in the synchronization coefficient and a greater decline in the reactive potentials for various regions of the spectrum. The children showed a greater instability in the content of adrenaline-like substances and a higher acetylcholine content than adults. The acetylcholine content increases with the effect of cold in the children, whereas it drops in adults. Orig. art. has 2 figures and 1 table.

Card 1/2

L 25167-65  
ACCESSION NR: AP5005772

ASSOCIATION: Laboratoriya neuro-gumoral'noy regulyatsii Instituta vysshey  
nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moscow (Laboratory of Neuro-  
Humoral Regulation, of the Institute of Higher Nervous Activity and Neurophysiology,  
AN SSSR)

SUBMITTED: 23Jul63

ENCL: 00

SUB CODE: LS

NO REF SOV: 016

OTHER: 006

JPRS

Card 2/2



SHAGAL, D.I.; SHRAYBERG, G.L.

Functional state of the adrenal cortex in myopathies. Probl. endok.  
i gorm. 10 no.1:9-15 Ja-F '64.

(MIRA 17:10)

1. Laboratoriya neyro-gumoral'noy regulyatsii (zav. - chlen-korres-  
pondent AN SSSR prof. N.I. Grashchenko) AN SSSR (rukovoditel' rabo-  
ty - prof. G.N. Kassil').

KASSIL', G.N.; GRIGOR'YEV, M.M.; CHIRZBERG, G.L.; VAYSPIL'D, I.I.;  
RAYT, M.D.; SHAGAL, D.I.

Humoral mechanisms of reactions caused by the introduction  
of carbocholine into cerebrospinal fluid. Dokl. AN SSSR  
156 no. 1:944-967 1964. (MIRA 1786)

1. Predstavleno akademikom V.N. Chernigovskim.

PRATUSEVICH, Yu.M.; SHAGAL, D.I.

Dynamics of the reactive potentials of the brain and biologically active substances in the blood under the effect of cold in children. Biul.eksp.biol.i med. 58 no.10:3-8 0 '64.

(MLRA 18:12)

1. Akademicheskaya gruppa pri deystvitel'nom chlene AMN SSSR prof. G.N.Speranskom i laboratoriya neyro-gumoral'noy regulyatsii (zav. - deystvitel'nyy chlen AMN SSSR prof. N.I.Graschenkov) Instituta vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva. Submitted July 23, 1963.

GLUKHOVSKIY, K.; IVOYLOV, A.; SHAGAL, G.

Thin-walled reinforced concrete three-dimensional shells. Na  
stroitel'stvo. no.1:10-13 Ja '61. (MIRA 14:6)

1. Zamestitel' nachal'nika Glavleningradstroya (for Glukhovskiy). 2.  
Direktor proyektного instituta No.1 Ministerstva stroitel'stva  
RSFSR (for Ivoylov). 3. Glavnyy konstruktor proyektного  
instituta No.1 Ministerstva stroitel'stva RSFSR (for Shagal).  
(Roofs, Shell) (Reinforced concrete construction)

SHMYKOV, P.A., inzhener; SHAGAL, G.M., inzhener; GOGIN, Ya.I., inzhener;  
MALKOV, D.E., inzhener.

Precast prestressed reinforced shell arches. Nov.tekh.i pered.op.  
v stroi. 18 no.12:9-12 D '56. (MLRA 10:1)  
(Roofs, Shell) (Prestressed concrete construction)

SOV/124-57-8-9613

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 145 (USSR)

AUTHOR: Shagal, G. M.

TITLE: Prefabricated Double-bent Shells of Reinforced Concrete (Sbornyye zhelezobetonnyye obolochki dvoyakoy krivizny)

PERIODICAL: V sb.: 15-ya nauchn. konferentsiya Leningr. inzh.-stroit. in-ta, Leningrad, 1957, pp 60-62

ABSTRACT: Bibliographic entry

Card 1/1

GLUKOVSKIY, K.A.; IVOYLOV, A.A.; LOBANOV, N.D.; SHAGAL, N.D.; EMDIN, N.A.

Precast prestressed reinforced concrete shells for covering industrial and public buildings. Prom. stroi. 39 no.3:30-35 '61.

(MIRA 14:4)

(Precast concrete construction) (Roofs, Shell)



BODYANSKIY, Vadim Lazarevich; SHAGAL', Vladimir Eduardovich;  
LEBEDEV, Ye.A., otv. red.; DZBUR, I.M., red.

[Modern Libya; a reference book] Sovremennaya Libiya:  
spravochnik. Moskva, Nauka, 1965. 300 p.  
(MIRA 19:1)

SHAGALEV, L. B.

7  
N-(3-Indolyl)butyramide. N. N. Surolov, V. P. Mamayev,  
and L. B. Shagalev. U.S.S.R. 105,124, Mar. 25, 1967.  
Addn. to U.S.S.R. 95,779. The cyclization of  $\text{PhNHN}-$   
 $\text{CH}(\text{CH}_3)\text{CO}_2\text{Et}$  is carried out with  $\text{H}_2\text{PO}_4$  in boiling Cello-  
solve. This procedure simplifies the process and increases  
the yield. M. Hosh.

PM  
MIT

SHAGALIN, A.N., inzh.

Hydraulic switch. Vcd. 1 san. tekhn. no. 3334 '64 (MIRA 1832)

SHAGALIN, M.N., inzh.

Boring with electric core drills with a constant axial pressure.  
Ugol' Ukr. 10 no. 1:50 Ja. '66. (MIRA 18:12)

1. Konotopskiy institut Avtomatuglerudprom.

SOV/165-58-6-18/24

AUTHOR: Shagalin, S.F.

TITLE: The Effect of a Single Dosage of the Spores of the Toadstool  
Arthrobotrys Oligospora Fres. Upon the Number of Nematod Larvae  
in the Feces of Sheep

PERIODICAL: Izvestiya Akademii nauk Turkmenskoy SSR, 1958, Nr 6, pp 105-107  
(USSR)

ABSTRACT: The single dosage of a preparation with spores of the toadstool  
Arthrobotrys Oligospora Fres., given to a group of sheep in the  
amount of 400 g per animal, led to the lessening of the number of  
larvae in the feces of, on the average, 1.9 times in six days, to  
8 times on individual days, and to the complete disappearance of  
them. The number of these larvae remains at a low level during  
the 11 days after the dosage is given. The taking of the prepara-  
tion has, in no way, a disadvantageous effect upon the organism  
of the animals.

Card 1/2

SOV/165-58-6-18/24

The Effect of a Single Dosage of the Spores of the Toadstool *Arthrobotrys Oligospora* Fres. Upon the Number of Nematode Larvae in the Feces of Sheep

There are 1 table and 2 Soviet references.

ASSOCIATION: Institut zoologii i parazitologii AN Turkmenkoy SSR (Institute of Zoology and Parasitology of AS of the Turkmenian SSR)

SUBMITTED: April 9, 1958

Card 2/2

SHAGALIN, S. F. Cand Vet Sci -- "Predatory fungi in the ~~prophylaxis~~ of strongylosis in horses and sheep under conditions of Turkmenistan." Ashkhabad, 1960 (State Committee of Higher and Secondary Specialized Education of the Council of Ministers Turkmen SSR. Turkmen Agr Inst im M. I. Kalinin). (KL, 1-61, 204)

-336-



SHAGALIN, Ya.

Progressive base. Sov. torg. 35 no.8:25-28 Ag '62.  
(MIRA 15:8)  
(Moscow--Wholesale trade)

TENDETNIK, Yu.Ya.; SONIN, M.D.; SHAGALINA, L.M.

Studying helminths of wild birds of southern Turkmenistan. Izv.  
AN Turk. SSR. Ser. biol. nauk no.6:78-85 '61. (MIRA 15:1)  
(TURKMENISTAN PARASITES BIRDS)  
(WORMS, INTESTINAL AND PARASITIC)

SHAGALINA, L.M.

Methods for preparing preparations predatory fungi and  
selecting active strains. Izv. AN Turk. SSR. Ser. biol.  
nauk no.1:42-47 '62. (MIRA 15:3)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.  
(FUNGI, PREDATORY)

SHAGALOV, A.F.; MIKERIN, B.I.; POKHITUN, I.Ye.

Causes of explosions in the crankcases of 5K gas-engine compressors. Neftoper. i neftekhim. no.4:39-42 '65.

(MIRA 18:5)

L 27947-66

ACC NR: AP6017709

SOURCE CODE: UR/0105/66/000/001/0086/0086

AUTHOR: Avilov-Karnaukhov, B. N.; Bol'sham, Ya. M.; Venikov, V. A.; Volobriniski, S. D.; Yermilov, A. A.; Konstantinov, B. A.; Knyazevskiy, B. Ye.; Minin, G. P.; Miller, G. R.; Mukoseyev, Yu. I.; Petrov, I. I.; Serbinovskiy, G. V.; Syromyatnikov, I. A.; Fedorov, A. A.; Kholmkiy, G. V.; Shagalov, A. S.; Chilikin, M. G.

ORG: none

TITLE: Prof. Georgiy Mikhaylovich Kayalov (on his 60th birthday)

SOURCE: Elektrichestvo, no. 1, 1966, 86

TOPIC TAGS: academic personnel, electric engineering personnel, electric equipment

ABSTRACT: In 1929, G. M. Kayalov completed the electrotechnical department of the Mechanical Faculty of the Novocherkassk Polytechnical Institute. Until 1947, he worked in the planning department of the Rostov Division of the All-Union Electrotechnical Union. In this time, he rose to the position of Chief Engineer. He directed the planning of a large number of important pieces of electrical equipment for various projects. He was active in the postwar restoration of many important industrial enterprises. He is the author of almost 70 published works, and has made a great contribution to modern, scientifically based methods of design and analysis of electrical loads for industrial equipment. He is on a number of commissions and in many scientific and technical societies. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Cord 1/1 BLG

UDC: 621.34

SHAGALOV, D.A.

Manufacture of multilayer skis using birch plywood. Der. prom.  
13 no.8:20-21 Ag '64. (MIRA 17:11)

...LAVIN, Isitriy Artem'evich; SMOLENSKIY, K.I., red.

[Manufacture of glued bentwood furniture parts; experience of the enterprises in Vologda Province] Proizvodstvo gnutokleenykh detalei mebeli; opyt predpriyatii Vologodskoi oblasti. Moskva, Izd-vo "Lesnaya promyshlennost'," 1964. 35 p. (MIRA 17:7)

BALEK, A.; GABESAM, L., inzh.; KHAVELKOVA, B., inzh.; STITSKEL, I., inzh.;  
SHVAGR, Ya., inzh.; TITERA, D., inzh. ZHDYARSKIY, M., doktor;  
SEME NOV, I.I. [translator]; KORMNOV, Yu.F., red.; SHAGALOV, G.L.,  
red.; REZOUKHOVA, A.G., tekhn.red.

[Economic development of Czechoslovakia from 1948 through 1958]  
Ekonomicheskoe razvitie Chekhoslovakii, 1948-1958 gg. Red.IU.F.  
Kormnov. Moskva, Izd-vo inostr.lit-ry, 1959. 367 p. Translated  
from the Czech. (MIRA 13:4)

1. Gosudarstvennoye statisticheskoye upravleniye Chekhoslovakii  
(for Balek, Gabesam, Khavelkova, Stitskel, Shvagr, Titera, Zhdynarskiy).  
(Czechoslovakia--Economic conditions)



KARPINSKIY, A. [Karpinski, Andrzej]; RAKOVSKIY, M. [Rakowski, Mieczyslaw];  
SOKOLOVSKIY, V.I. [translator]; SHALASHOVA, V.P. [translator]; MA-  
KARENKO, Ya.I., red.; SHAGALOV, G. [red.]; KHOMYAKOV, A.D., tekhn.  
red.

[Poland against the background of the world economy] Pol'sha na fone  
mirovoi ekonomiki. Pod obshchei red. IA.I. Makarenko. Moskva, Izd-vo  
inostr. lit-ry, 1961. 221 p. Translated From the Polish. (MIRA 14:11)  
(Poland—Economic conditions) (Economic conditions)

RAMZES, V.B. [translator]; RUSETSKIY, S.B. [translator]; PEVZNER, Ya.A.,  
red.; SHAGALOV, G.L., red.; DZHATIYEVA, F., tekhn. red.

[Monopolistic capital of modern Japan. Translated from the Japanese]  
Monopolisticheskii kapital sovremennoi Iaponii. Moskva, Izd-vo ino-  
str. lit-ry, 1961. 322 p. (MIRA 14:7)  
(Japan--Capital) (Japan--Trusts, Industrial)

SHAGALOV, G. (L.)

Methods of determining the economic effectiveness of foreign  
trade in Poland. Vnesh. torg. 42 no.3:18-23 '62. (MIRA 15:3)  
(Poland--Commerce)

KHACHATUROV, T.S., red.; DAN'SHINA, V.N.[translator]; ZOTOV, B.D.  
[translator]; ISUPOV, V.T.[translator]; MENIKER, V.D.[translator];  
TEREKHOV, V.F.[translator]; SHAGALOV, G.L.[translator]; KORMNOV,  
Yu.F., nauchnyy red.; ZAYTSEV, N.F., red.; KHOMYAKOV, A.D., tekhn.  
red.

[Problems in the economic efficiency of capital investments] Vopro-  
sy ekonomicheskoi effektivnosti kapitalovlozhenii; sbornik statei.  
Pod red. i so vstup. stat'ei T.S.Khachaturova. Moskva, Izd-vo  
inostr. lit-ry, 1962. 276 p. (MIRA 15:12)

1. Chlen-korrespondent Akademii nauk SSSR (for Khachaturov).  
(Capital investments)

ETA 1004, I. V.

Chem Abs

V-48 25 Jan 54

Organic Chem

Diethyl 1,2,3,4-tetrahydro-1-oxo-2-phenyl-3,3-naphthalenedicarboxylate. V. M. Rodionov, N. N. Skvorov, and L. V. Smaglov. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Simey Org. Soedinenii, Sbornik 2*, 94-7(1952); cf. *C.A.* 44, 2504c. — To 150 ml. abs. EtOH is added 6.75 g. sliced Na and the resulting hot soln. is treated slowly with 73.5 g.  $\text{PhCH}_2\text{CH}(\text{CO}_2\text{Et})_2$ . The mixt. is refluxed on oil bath while 75 g.  $\text{PhCHBrCO}_2\text{Et}$  is added to it dropwise and the refluxing with stirring is continued 15 hrs. until the mixt. is no longer alk. to litmus. EtOH is distd. and the residue distd. with 50 ml.  $\text{H}_2\text{O}$  and 100 ml. satd. aq. NaCl. After stirring to dissolve NaBr ppt., the mixt. is extd. with  $\text{Et}_2\text{O}$  (filtration may be necessary to break emulsions) and the aq. layer is extd. twice with  $\text{Et}_2\text{O}$ . The combined exts. yield an unstated amt. of  $\text{PhCH}_2\text{C}(\text{CO}_2\text{Et})_2\text{CHPhCO}_2\text{Et}$ , b<sub>p</sub> about 200°, m. 46-7°. To 6 g. of this ester is added 15 ml. 92%  $\text{H}_2\text{SO}_4$  and the mixt. allowed to stand 14 days in closed vessel; after pouring on ice the mixt. is extd. with  $\text{Et}_2\text{O}$ , the ext. is washed with satd. NaCl soln., followed by 10%  $\text{Na}_2\text{CO}_3$  (1-1.5 l.  $\text{Et}_2\text{O}$  is needed), again with satd. NaCl, dried and concd. yielding 40-5% di-Et 1,2,3,4-tetrahydro-1-oxo-2-phenyl-3,3-naphthalenedicarboxylate, m. 117-18°, after washing with petr. ether and cold EtOH. Hydrolysis with aq. alc. NaOH yields the dicarboxylic acid, m. 142-2.5°.

G. M. Kosolapoff

③ 4

1. L. m

17

CHASHE / L J

Perm.

Chem Abs

V-48 25 Ja 54

Organic Chem

~~1,2,3,4-Tetrahydro-1-oxo-2-phenyl-3-naphthalenedicarboxylic acid.~~ V. M. Rodionov, N. N. Suvorov, and L. V. Sharalov. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik 2*, 138-9 (1952).—Di-Et 1,2,3,4-tetrahydro-1-oxo-2-phenyl-3,3'-naphthalenedicarboxylate (I) (5 g.) is refluxed with 60 ml. 10% NaOH and 20 ml. EtOH 2 hrs.; EtOH is distd. and the residue dild. with H<sub>2</sub>O and filtered. The filtrate acidified with HCl to Congo red yields a ppt. of the free dicarboxylic acid. This heated at 160-60°, until CO<sub>2</sub> evolution stops, gives little compd. (II), isolated by soln. of the residue in 20 ml. hot MePh and addn. of 10 ml. hot heptane. The acid is obtained in 68% yield, m. 139-41° [pure, m. 142-3° (from MePh)]. The crude product is directly used below. The product formed from 2.85 g. (I) is refluxed 4 hrs. with 30 ml. abs. EtOH and 1.2 ml. concd. H<sub>2</sub>SO<sub>4</sub>; after cooling with ice there is formed 1.4 g. II *Et ester* (III), m. 89-9.5°; 0.35 g. can be obtained by concn. of the residual soln. After washing with cold EtOH there is obtained 81% yield III, m. 90-1° (from EtOH) (cf. C.A. 44, 2604e). G. M. K.

7-14-54

SHAGALOV L. V.

USSR/Chemistry - Pharmaceuticals Alkaloids

Feb 52

"Synthesis of 6-Carboxy-11methyl-5, 6, 13, 14- tetrahydro-1, 2-benzophenanthridine (I)," Acad V. M. Rodionov, N. N. Suvorov, and L. V. Shagalov

"Dan SSSR" Vol 82, No 5, pp 731 - 734

(I) was synthesized with a theoretical yield of 75%. It has a structure similar to that of the alkaloid helidonine.

238T2

Shagalov, L. B.

Synthesis of halogen-substituted  $\gamma$ -(3-indolyl)butyric acids. N. N. Suvorov, V. P. Mamaev, and L. B. Shagalov. *Doklady Akad. Nauk S.S.S.R.* 93, 837-8 (1967). *Chem. Abstr.* 62:12111d. 5 g.  $p\text{-ClC}_6\text{H}_4\text{NHNH}_2$  and 6 g.  $\text{OHCCH}_2\text{CH}_2\text{CH}_2\text{CO}_2\text{Et}$  in 20 ml. EtOH 0.5 hr., aq. soln. of  $\text{CaH}_2$  evapn. of the sol. vents in vacuo and refluxing the residue with 4 ml. concd.  $\text{H}_2\text{SO}_4$  in 45 ml. abs. EtOH 10 hrs. gave after addn. of ice and extrn. with EtO, 28.5% Et  $\gamma$ -[3-(5-chloroindolyl)]butyrate, m. 98.5-9.5°, this refluxed 15 min. in 5% alc. KOH gave 100% free acid, m. 121-3° (from MePh). Similarly  $p\text{-ClC}_6\text{H}_4\text{NHNH}_2$  gave 27% Et  $\gamma$ -[3-(5-chloroindolyl)]butyrate, m. 97-8° (from isooctane), which gave 100% free acid, m. 130.5-40° (from MePh).  $p\text{-BrC}_6\text{H}_4\text{NHNH}_2$  similarly gave 9.7% Et  $\gamma$ -[3-(3-bromoindolyl)]butyrate, m. 140-7° (from heptane), which gave 100% free acid, m. 140-7° (from MePh). Similarly was obtained 6.1% Et  $\gamma$ -[3-(5-iodoindolyl)]butyrate, m. 83-7.5° (from  $\text{C}_6\text{H}_6$ -heptane), yielding 100% free acid, m. 151.5-5.5° (from MePh). The reaction of  $m\text{-ClC}_6\text{H}_4\text{NHNH}_2$  gave 24% mixed Et  $\gamma$ -[3-(4-chloro- and 6-chloroindolyl)]butyrate, b.p. 203-24°, m. 55-7°, which were sepd. by chromatographic adsorption on  $\text{Al}_2\text{O}_3$  from  $\text{C}_6\text{H}_6$  and elution with the same solvent, yielding the 2 isomers, m. 82-3° and 68-9°, the identity of each is unknown. Hydrolysis gave the free acids, m. 145-6.5° and 135.5-7.0° resp. Hydrolysis of the mixed esters gave the mixed free acids, m. 121-2°.  $o\text{-ClC}_6\text{H}_4\text{NHNH}_2$  similarly gave 18.6% Et  $\gamma$ -[3-(7-chloroindolyl)]butyrate, m. 63.5-4.5°, which gave the free acid, m. 137-7.5° (from MePh-heptane). G. M. Kosolapoff



SHAGALOV, L.B.

Synthesis of 5-alkoxy- and 5-aryloxy- $\gamma$ -3-indolylbutyric acids. N. N. Savitsky, V. P. Kuznetsov, and L. B. Shagalov (L. A. Mendeleev Chem. Technol. Inst., Moscow). Doklady Akad. Nauk S.S.S.R. 101, 103-4 (1955); *cf.* C.A. 49, 10063. —Diazotization of  $p$ -H<sub>3</sub>NC<sub>6</sub>H<sub>4</sub>OPh in HCl and reduction at -5° with SnCl<sub>4</sub>-HCl yielded, after treatment of the product with 25% NaOH 1 hr. 54%  $p$ -PAOC<sub>6</sub>H<sub>4</sub>NHNH<sub>2</sub> (I), m. 80-7° (from petr. ether); HCl salt, decomp. 182-3° (from H<sub>2</sub>O). 2,4-Cl<sub>2</sub>(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> similarly gave 29% unstable 2,4-Cl<sub>2</sub>(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NHNH<sub>2</sub> (II), m. 59-9.5°. Refluxing 7.5 g.  $p$ -MeOC<sub>6</sub>H<sub>4</sub>NHNH<sub>2</sub> and 8.6 g. Et  $\gamma$ -formylvalerate in EtOH 0.5 hr., followed by addn. of C<sub>6</sub>H<sub>6</sub>, removal of solvents *in vacuo* and refluxing the residue with 15 g. H<sub>3</sub>PO<sub>4</sub> and 200 ml. MeOH 8.5 hrs., followed by diln. with H<sub>2</sub>O, gave 50.3% Et  $\gamma$ -[3-(5-methoxyindolyl)]butyrate, m. 70.5-1.5° (from aq. EtOH); this hydrolyzed with 6% alc. KOH to 92% free acid (III), m. 135-5.5° (from H<sub>2</sub>O or C<sub>6</sub>H<sub>6</sub>). Similarly  $p$ -PhCH<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>NHNH<sub>2</sub> and Et  $\gamma$ -formylvalerate in EtOH gave after the above treatment, followed by hydrolysis of the crude ester with 5% alc. KOH  $\gamma$ -(5-benzylxyindolyl)butyric acid, m. 161.5-2.5° (from EtOH). I similarly gave 29%  $\gamma$ -[3-(5-phenoxyindolyl)]butyric acid, m. 107-8° (from aq. EtOH), while II gave 31%  $\gamma$ -[3-(5-methoxy-7-chloroindolyl)]butyric acid, m. 133.5-6.5° (from MeOH). All had low growth stimulating activity except III which was close to  $\gamma$ -3-indolylbutyric acid.

G. M. Kosolapoff

(1)

ZASOSOV, V.A.; METEL'KOVA, Ye.I.; VOLZHINA, O.N.; SHAGALOV, L.B.; VLASOV,  
A.S.

New method of producing norsulfazole. Med. prom. 17 no.9:15-22  
S'63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni Sergo Ordzhonikidze.

SHAGALOV, L.B.; SOROKINA, N.P.; SUVOROV, N.N.

Derivatives of indole. Part 21: Synthesis of  
4- and 6-chloroindolylbutyric acids. Zhur. ob. khim. 34  
no. 5:1592-1595 My '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni Ordzhonikidze.

EXCERPTA MEDICA Sec 13 Vol 13/8 Dermatology Aug 59

2264. SYNTHOMYCIN THERAPY FOR GONORRHOEA (Russian text) - Shagalov  
M. N. Turkmen Dermato-Vener. Res. Inst., Ashkhabad - TRUDY TURKM.  
KOZHNO-ENER. INST. (Ashkhabad) 1957, 5 (246-252)  
Synthomycin (chloramphenicol), administered perorally for 3-4 days (total dosage  
10-15 g.) cured gonorrhoea in 50 out of 51 men (46 had acute and 5 ascending  
gonorrhoea) and all of 17 women treated (chronic form in 10 cases, acute form in  
6 patients and ascending form in one case). References 11.

Mashkilleison Jr - Moscow (S)

PROSHIN, Anatoliy Sergeyevich; ZBOROVSKAYA, R.L., inzh., red.; SHAGALOV, Ye.S., red.; VELITSYN, B.L., tekhn. red.

[Mechanization of the basic assembly operations in the construction of high-capacity thermal electric power plants] Mekhanizatsiya osnovnykh montazhnykh rabot pri stroitel'stve moshchnykh teplovykh elektrostantsii. Moskva, Orgenergostroi, 1960. 62 p.

(MIRA 14:11)

(Electric power plants--Design and construction)  
(Hoisting machinery)

BAKHMETOVA, T.Ye.; DOVGER, F.F.[deceased]; SMIRNOV, P.A.; PROKHOROV, A.N.; SHUMAKOV, I.A.; MIROSHINA, Yu.N.; SHAGALOV, Ye.S., red.;

[Album of sketches of stock equipment for the erection of structural elements] Al'bom chertezhei inventarnykh prispoblenii dlia vozvedeniia stroitel'nykh konstruktsii. Moskva. Pt.1.[Cradles, stagings, ladders, guard rails. Approved by a resolution of the technical administration No.163 of Dec. 30, 1959] Liul'ki, ploshchadki, lestnitsy, ograzhdeniia. Utverzhden resheniem tekhnicheskogo upravleniia No.163 ot 30 dekabria 1959 g. 1962. 141 p.

(MIRA 15:10)

1. Vsesoyuznyy institut po proyektirovaniyu organizatsii energeticheskogo stroitel'stva "ORGENERGOSTROI." Moskovskiy filial.

(Building)

BERENSHTEYN, S.A.; VAYSLEYB, V.P.; VARENIK, I.F.; DOBRYNCHENKO, M.V.;  
YEGOROV, B.P.; KLISENKO, Yu.F.; MOGILEVSKIY, I.I. [deceased];  
PEREYASLAVTSEV, N.A.; PILIPENKO, V.I.; SAPOZHNIKOV, F.V., inzh.;  
SHEPELEV, V.M.; SIMULEVICH, M.L.; YARMOLINSKIY, I.M.; SHAGALOV,  
Ye.S., red.; KORIKOVSKIY, I.K., red.; LARIONOV, G.Ye., tekhn. red.

[Construction of the V.I.Lenin State Regional Electric Power  
Plant in Simferopol] Opyt stroitel'stva Simferopol'skoi GRES  
im. V.I.Lenina [By] S.A.Berenshtein i dr. Moskva, Gosenergoizdat,  
1962. 151 p. (MIRA 15:6)

(Simferopol--Electric power plants)

BAKHMETOVA, T.Ye., inzh.; DOVGER, F.F., inzh.[deceased]; MIROSHINA,  
Yu.N., inzh.; PROKNGROV, A.N., inzh.; SMIRNOV, P.A., inzh.;  
SHUMAKOV, I.A , inzh.; SHAGALOV, Ye.S., red.

[Album of drawings of stock equipment for the erection of  
structural elements] Al'bom chertezhei inventarnykh prisposoblenii  
dlia vozvedeniia stroitel'nykh konstruktsii. Moskva. Pt.2. [Scaf-  
folding, trestles, trench shoring] Lesa, podmosti, krepleniia tran-  
shei. Utverzhen resheniem tekhnicheskogo upravleniia. No.61 ot  
19 marta 1960 g. 1962. 113 p. (MIRA 16:2)

1. Vsesoyuznyy institut po proyektirovaniyu organizatsii energo-  
ticheskogo stroitel'stva "Orgenergostroy." Moskovskiy filial.  
(Scaffolding) (Shoring and underpinning)



TEITLIN, L.A. [Tseytlin, L.A.]; ELTISEVA, A.A. [Yeltysheva, A.A.]; GRAFAS,  
N.I.; TIGANOV, A.S. [TSyganov, A.C.]; SAFARENKO, D.I.;  
SAGALOVA, B.I. [Shagalova, B.I.]

Crucibles of the electric induction furnaces made of a given  
filling material for the melting of aluminum alloys. Analele  
metalurgie 16 no.4:75-80 O-D '62.

85553

S/131/60/000/011/001/002  
B021/B058

15.3000 *also 2311*

AUTHORS: Gaylit, A. A., Grafas, N. I., Tsyganov, A. S., Shagalova,  
B. Yu., Nekrasov, K. D., Sassa, V. S.

TITLE: Experimental Use of Heat-resistant Concrete *5*

PERIODICAL: Ogneupory, 1960, No. 11, pp. 520-523

TEXT: The applicability of heat-resistant concrete for lining crucible induction furnaces was studied at the Moskovskiy zavod alyuminiyevykh splavov (Moscow Plant for Aluminum Alloys). The laboratory for heat-resistant concretes developed the concrete composition on the basis of investigations. The following materials were required for 1 m<sup>3</sup> of concrete: 800 kg coarse-grained and 500 kg fine-grained fire-clay filler, 550 kg fine-ground magnesite, 18 to 21 kg commercial sodium fluosilicate and 300 to 350 kg liquid glass with a density of from 1.36 to 1.38 g/cm<sup>3</sup>. The molten glass corresponded to ГОСТ 962-41 (GOST 962-41), its modulus amounted to 2.4 to 3.0. The weight by volume of the heat-resistant concrete in dry state amounted to 2.2 g/cm<sup>3</sup>, the fire shrinkage at temperatures up to 1400°C to 0.2%. The mean linear thermal-expansion coefficient amounted to

Card 1/3

85553

Experimental Use of Heat-resistant Concrete

S/131/60/000/011/001/002  
B021/B058

$6.7 \cdot 10^{-6}$  in the range of from 20 to  $1000^{\circ}\text{C}$ . The superior properties of heat-resistant concrete make it possible to build and dry a crucible induction furnace within seven days. The crucible with a wall thickness of 60 mm was made in a split mold by means of a vibration device (Fig. 1). The inductor lining was rammed at the Podol'skiy zavod tsvetnykh metallov (Podol'sk Plant for Nonferrous Metals). This work was conducted by a group of engineers under the supervision of the Nauchno-issledovatel'skiy institut betona i zhelezobetona (Scientific Research Institute of Concrete and Reinforced Concrete). The graphic representation of the drying and annealing of the crucible is shown in Fig. 2 and a dried crucible made of heat-resistant concrete in Fig. 3. The mechanical properties of the alloy AL10M (AL10ch) molten in this furnace are higher than when molten in a radiation furnace. The crucibles made from heat-resistant concrete may be used for melting various nonferrous metals with a melting temperature of up to  $1200^{\circ}\text{C}$ . The results are: total drying and annealing time 140 hrs, aluminum alloys were molten for 2.5 months with up to 15 heats per day. The crucible withstood 700 heats. About 116 tons of metal were molten. After 700 heats, cracks up to 0.7 mm wide were found. Experiments for the manufacture and test of larger crucibles are intended. The

Card 2/3

Experimental Use of Heat-resistant Concrete

S/131/60/000/011/001/002  
B021/B058

applicability of heat-resistant concrete of various composition for crucible induction furnaces and other metallurgical aggregates is to be studied. There are 3 figures.

ASSOCIATION: Moskovskiy zavod alyuminiyevykh splavov (Moscow Plant for Aluminum Alloys) Gaylit, A. A., Grafas, N. I., Tsyganov, A. S., Shagalova, B. Yu.; Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (Scientific Research Institute of Concrete and Reinforced Concrete of the Academy of Construction Engineering and Architecture USSR) Nekrasov, K. D., Sassa, V. S. ✓

Card 3/3

TSEYTLIN, L.A.; YELTYSHEVA, A.A.; GRAFAS, N.I.; TSYGANOV, A.S.; SHAFARENKO,  
D.I.; SHAGALOVA, B.Yu.

Induction furnace crucibles made of rammed materials, for the  
smelting of aluminum alloys. TSvet. met. 35 no.5:71-75 My  
'62. (MIRA 16:5)

(Aluminum alloys—Electrometallurgy) (Crucibles)

IVANOV, S.N.; SHAGALOVA, E.D.

Use of  $p^{32}$  for studying the phosphorus uptake by early cabbage  
using various methods of fertilizer placement. Dokl. AN BSSR  
8 no. 1:57-59 Ja '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut pochvovedeniya Ministerstva  
sel'skogo khozyaystva BSSR.

SHARGALOVA, L.A.

Propagation of ultrasonic waves in polymer solutions.  
 I. G. Mikhailov and L. A. Shargalova. *Doklady Akad. Nauk S.S.S.R.* 89, 826-828 (1969). English translation issued as *U.S. Atomic Energy Comm. NSF-tr-117, 1-4(1053)*.  
 The absorption and velocity of ultrasonic waves were detd. for a 13.4% aq. polyvinyl alc. soln., a 6.4% polyisobutylene soln. in benzene, polystyrene solns. in benzene, and Oppanol solns. in transformer oil. The absorption was measured both by a pulse method using a modified Sokolov defectoscope with carrier frequencies of 1.25, 2.50, and 3.75 Mc./sec., and by a prism method previously developed by M. and Solov'yev (*C.A.* 45, 7839i) utilizing brass shells in the shape of prisms. The wave velocity was detd. with an ultrasonic interferometer. Values for the ratio of the absorption coeff. to the square of the frequency used,  $\alpha/\nu^2$ , were detd. From viscosities measured in an Ostwald viscometer,  $\alpha/\nu^2$  was calcd. from Stoke's formula as  $4400 \times 10^{-12}$  and  $12,000 \times 10^{-12}$  for the polyvinyl alc. and polyisobutylene solns., resp. The observed  $\alpha$  was too small to be detected, and thus  $\alpha/\nu^2 < 200 \times 10^{-12}$ . The structural formation in the polystyrene solns. was considered to be weak, since no dependence of the viscosity on the velocity gradient was found except at the highest concn. studied, 14.2%. The absorption coeff. increased only slightly with concn.; this indicated that the mechanism of sound propagation was the same in solns. having weak structural formation and in completely structured solns. such as gelatin (M. and Tarutina, *C.A.* 45, 416d). As for the polystyrene solns., the Oppanol in transformer oil solns. showed a much smaller dependence of  $\alpha$  on concn. than predicted from Stoke's formula. The data obtained indicated that the use of a completely stationary network model was inapplicable to ultrasonic propagation in polymeric solns. Values calcd. from the Gotlib-Vol'kenshtein equation (cf. preceding abstr.) agreed with the exptl. data for the polystyrene solns. Philip Goodman

SHAGALOVA, L. I.

USSR/Chemistry - Cellulose Acetate

Jun 52

"Stabilization of Cellulose Triacetate Film Against Deterioration Due to Oxidation at High Temperatures," A. A. Freyman, V. A. Bartashev, L. I. Shagalova, et al, Leningrad Inst of Motion Picture Engineers, Lab of Motion Picture Film Base Technol

"Zhur Frik Khim" Vol XXV, No 6, pp 626-633

The stability of triacetate films, used in particular as elec insulation material, toward air, high temps, and other factors, can be increased by addn of special substances. Analyzed the gaseous phase in an app contg triacetate film both with and without stabilizer. The film was in an oxygen medium at temps of 80 to 140°C. Film samples dept at the same temps in nitrogen were used for comparison. Pyrogallol,  $\alpha$ -naphthylamine, phenyl- $\beta$ -naphthylamine and phenyl- $\beta$ -naphthylamine were tested for action as stabilizers. The latter 2 were found to be the most effective.

218T34



SHAGALOVA, L. I.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
Cellulose and Paper

⑥ *matte*  
Stabilization of cellulose triacetate films against thermo-  
oxidative destruction. L. I. Shagalova, V. A. Barinova,  
V. I. Shagalova, V. V. Ganneman, G. P. Marova, and  
V. I. Shagalova. *App. Chem. U.S.S.R.* 25, 106-11  
(1953) (Eng. translation).—See C.A. 47, 2970g H. L. H.

9-17-54

SHAGALOVA, L. I.

USSR/Chemistry - Photofilm Stabilizers

Aug 52

"The Change in the Amount of Stabilizers in Triacetate Films During Destruction by Oxidation at Elevated Temperatures," A. A. Freyman, V. A. Bartashov, L. I. Shagalova, N. L. Perfilova, W. D. Kurchenko, Lab of Techno for Moving Picture Film Base, Lenin-grad Inst of Moving Picture Film Engineers

"Zhur Prik Khim" Vol 25, No 8, 884-889

States that stabilizers present in films are subject to chem change to a greater deg than stabilizers in their free form, under similar conditions. The nature of the change in the quantity of phenyl- $\alpha$ -naphthylamine and phenyl- $\beta$ -naphthylamine is identical in films. During the process of oxidation, the amt of stabilizer changed, whereas there was no thermal decompn of phenyl- $\beta$ -naphthylamine when heated at 140 $^{\circ}$  C. Intermediate products of the oxidation of aromatic amines were also shown to be stabilizers of triacetate films. The action of oxygen on plasticized, stabilized films, at a temp of 140 $^{\circ}$  C, was studied. The simultaneous presence of a stabilizer (secondary amine) and dibutylphthalate assured a greater resistance of both to the effect of oxygen at high temps.

PA 228T13

1. SHAGALOVA, L. I.; FREYMAN, A. A.
  2. USSR (600)
  4. Cellulose Triacetate
  7. Study of stabilization of cellulose triacetate films by secondary aromatic amines at high temperatures or by ultraviolet radiation in air. Zhur. prikl. khi 25 no. 10, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

GAYLIT, A.A.; GRAFAS, N.I.; TSYGANOV, A.S.; SHAGALOVA, B.Yu. NEKRASOV, K.D.;  
SASSA, V.S.

Practices of using heat resistant concrete. Ogneupory 25 no.11:520-  
523 '60. (MIRA 13:12)

1. Moskovskiy zavod alyuminiyevykh splavov (for Gaylit, Grafas,  
TSyganov, Shagalova). 2. Nauchno-issledovatel'skiy institut betona  
i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for  
Nekrasov, Sassa).

(Concrete—Curing)

**BC**

**Production of nitrilehyde and nonyl alcohol.**  
**R. SWAGALOTA (Minsk. Sov. Pat. 1986, 11, 453—**  
**453).—An improved prep. from carbonic acid is**  
**described. (orig. invent. On, Ann. (r))**

**A5B-5LA METALLURGICAL LITERATURE CLASSIFICATION**

**REGIONAL NUMBER**  
S0000 S10 S20 S30 S40 S50 S60 S70 S80 S90  
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10

Production of nonylaldehyde and nonyl alcohol. R. Shagalova. *Makholova Zhivore Delo* 11, 452-3 (1935).

The Hesse method of production of nonylaldehyde (I) and nonyl alc. (II) by fusing undecylenic acid with KOH to give pelargonic acid (III), reducing the latter with Na in abs. alc. to II and oxidizing the latter to I. was modified by reducing III in the presence of a MnO<sub>2</sub> catalyst to I of high purity with 60-5% yield. The method of reducing I to II is being investigated. R.

450.51A METALLURGICAL LITERATURE CLASSIFICATION

CA

Decylaldehyde from the oil of blooming coriander  
L. Va. Bryusova, R. Yu. Shagalova and N. Novikova  
*Sovetskaya Dushitsa*, Moscow, 1949, 217-22.  
Abstr. Refert. Zhur. 1949, No. 1, 117-18. Coriander oil  
obtained from coriander seeds consists only partly of  
decylaldehyde. The oil of the green parts of the same  
plant contains up to 95% of aldehydes, 10% of which is  
decylaldehyde. Coriander oil used for producing decyl-  
aldehyde contained 31% of aldehydes and had acid no. 2.3,  
ether no. 25,  $n_D^{20}$  1.4580. Fractionation of the oil pro-  
duced a fraction containing a high percentage of the aldehyde.  
This fraction was hydrogenated with a 10-12% excess of  
H in alc. at 40-55° in the presence of a Ni catalyst. The  
decylaldehyde obtained after a 2-fold fractionation by  
75-77°  $n_D^{20}$  0.839,  $n_D^{20}$  1.4340, mol. refraction 18.16 (when  
calcd. to  $C_{11}H_{22}$  it is 18.39); oxime, m. 60°; semicarba-  
zone m. 101.5-102°. These const. differ slightly from  
those given in the chem. literature. The yield of decyl-  
aldehyde is approx. 30% of the aldehydes contained in the  
oil. W. R. Henn

ASH, S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

117 AND 120 ORDERS																										120 AND 121 ORDERS																									
117 AND 120 ORDERS																										120 AND 121 ORDERS																									
<p>Production of enanthaldehyde and hendecenoic acid by pyrogenetic decomposition of methyl ricinoleate. S. S. Nametkin and R. Yu. Shagolov: <i>Sintez Dushitsykh Veshchestv, Sbornik State 1939</i>, 261-71; <i>Khim. Referat. Zhur.</i> 1940, No. 4, 118.—The initial raw material used for the expts. was tech. Me ricinoleate obtained from castor oil and MeOH, at first according to the method of Haller (C. A. 1, 1387) in the presence of 1% dry HCl, and later according to the method modified by N. and S. with oleum (not more than 5% of the wt. of castor oil) instead of HCl. The reaction was carried out at 67-8°. The Me ricinoleate obtained was decrystd. pyrogenetically at 350°, in a 300-mm. vacuum and with a velocity of the ester of 2 kg./hr. Pyrolysis was carried out in a Cu tube (1.5 m. long, 12 mm. diam.) in an elec. oven. The product contg. 25-8% of aldehyde was distd. with water vapor, producing a complete sepn. of enanthole. The yield of enanthole contg. 80-5% of the aldehyde was 17-18% (of the castor oil used for the reaction). The enanthole had <math>d_4^{20}</math> 0.821 and <math>n_D^{20}</math> 1.418. The residue remaining after the distn. of enanthole is a mixt. of esters of hendecenoic acid. It was saponifd. and fractionated, producing 95-7% hendecenoic acid which did not require a further purification; the yield was 25-7% of the wt. of castor oil used for the reaction.</p> <p>W. R. Henn</p>																																																			
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<p>10</p> <p>ca</p> <p>Production of jasmine aldehyde. S. S. Nametkin and R. M. Shagalova. <i>Sintezy Dushistykh Veshchestv, Nbr 118, State 1939, 271-4; Khim. Referat. Zhur. 1940,</i></p> <p>No. 4, 118.—The synthesis of jasmine aldehyde (<math>\alpha</math>-amylcinnamaldehyde) was carried out by condensation of enanthole with <math>\text{BzH}</math>. Max. yields of jasmine aldehyde were obtained from condensation in aq. alc. with a 1:5 ratio of enanthole to <math>\text{BzH}</math> and approx. 1% excess of base. A product suitable for perfumery purposes was obtained by fractionating the tech. product at 5 mm. at <math>140-1^\circ</math>. The by-products included <math>\text{BzOH}</math>, benzyl alc. and a complex ester whose nature has not been detil. W. R. H.</p>																																																																													
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26																																																				

Production of nonaldehyde and nonyl alcohol. S. S. Nametkin and R. Yu. Shagalova. *Sintezy Dushistykh Veshchestv, Sbornik State 1936, 274-81; Khim. Referat. Zhur. 1940, No. 4, 118-19.*—Nonioic acid was used as the initial substance for producing nonaldehyde and nonyl alc. The Kraft-Hesse method based on fusing hendecenoic acid with base was used for the capts. The reaction is completed when no more foam is formed. Cool the mass, add cold water until it dissolves completely and sep. the tech. nonyl alc. by adding tech. HCl. Fractionation of the nonioic acid gives a fraction contg. 97-8% nonioic acid (65-70% of the wt. of hendecenoic acid instead of the 28% obtained by Hesse). Nonylaldehyde was obtained by reduction of the acid in a current of CO<sub>2</sub> according to the method developed by Nametkin and Khol'mer for obtaining lauraldehyde (C. A. 36, 36291). The yield of nonylaldehyde, d<sub>4</sub> 0.860, n<sub>D</sub><sup>20</sup> 1.4240, suitable for *perfumery purposes* was 50-5 wt. % or 50-62% of the theoretical. Nonyl alc. was obtained by 2 methods: according to Bouveault (C. A. 16, 1911) and by hydrogenation. Et nonoate obtained according to Bouveault was reduced with metallic Na. The yield of alc., d<sub>4</sub> 0.827, n<sub>D</sub><sup>20</sup> 1.435, was 75-80% of the theoretical (instead of 43% given in the literature). In the hydrogenation method H was passed through the bisulfite compd. of the aldehyde in the presence of a pyrophoric Ni catalyst in alc. The reaction was carried out at 55-60° for 4-5 hrs. The yield of nonyl alc. suitable for *perfumery purposes* was 70-5%.

SHAGALOVA, R. Yu. Cand. Chem. Sci.

Dissertation: "Preparation of Enanthol and Undecylenic Acid by Pyrogenic Decomposition of the Methyl Ether of Ricinoleic Acid and Their Utilization in the Synthesis of Scented Substances." All-Union Sci Res Inst of Synthetic and Natural Essential Oils, 26 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

SHAGALOVA, R.Yu.; DAYEV, N.A.; GOL'PERIN, N.I.; KUZNETSOVA, M.P.

Some improvements in the chloral method for the production of  
vanillin and vanillal. Trudy VNIISNDV no.4:34-38 '58.  
(MIRA 12:5)

(Vanillin) (Bourbonal) (Chloral)

SHAGALOVA, S.A., kand. tekhn. nauk; REZNIK, V.A., inzh.

Effect of initial pressures on the nature of the development of  
dust explosions in natural fuels. Teploenergetika 12 no.7:63-65  
Jl '65. (MIRA 18:7)

1. TSentral'nyy kotloturbinnyy institut.

SHAGALOVA, S. D.

Dissertation: "Low Temperature Oxidation and Spontaneous Combustion of Natural Fuels."  
Cand Tech Sci, Central Sci Res Boiler-Turbine Inst imeni I. I. Polzunov (TsKTI), Leningrad,  
1953. Referativnyy Zhurnal--Khimiya, Moscow, No 14, Jul 54.

SO: SUM No. 356, 25 Jan 1955.

SHAGALOVA, S.L., kandidat tekhnicheskikh nauk.

Analysis of conditions leading to spontaneous combustion of natural  
fuels. [Trudy] TSETI 26:189-230 '54. (MIRA 8:2)  
(Combustion, Spontaneous) (Fuel)

SHAGALOVA, S.L.

AID P - 2323

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 4/17

Author : Shagalova, S. L., Kand. of Tech. Sci.

Title : Research on explosiveness of **pulverized fuel** dust

Periodical : Teploenergetika, 5, 22-25, My 1955

Abstract : The author reports a study made on the explosiveness of pulverized coal and peat dust. A detailed description and diagram of the experimental installation are given. The data on the explosive properties of various coals and peat are summed up in tables and illustrated by curves. Eight Russian, 1933-1948 and 1 English reference, 1948.

Institution : Central Turbine-Boiler Institute

Submitted : No date



SHAGALOVA, S. L., POMERANTSEV, V. V. and KATSNEL'SON, B. D.  
(Masters of Science)

"Physical and Chemical Laws of the Process of Combustion of Natural Fuel,"  
paper presented at the 5th World Power Conference, Vienna, 1956

In Branch # 5

POMERANTSEV, V. V., Cand. Tech. Sci.; KATSNELSON, B. D., Cand. Tech. Sci.; SHAGALOVA, S. L.,  
Cand. Tech. Sci.

"Physikalisch-chemische Gesetzmässigkeiten der Verbrennprozesse von natürlichen Brennstoffen," List of General Reports and Papers presented at the Fifth World Power Conference, Vienna, 10 January 1956, pg. 28.

E-2298

Shagalova, S.L.

56. FACTORS INFLUENCING DUST EXPLOSIONS IN NATURAL FUELS.  
 Shagalova, S.L. (Toploenergetika (Heat Power Engng. Moscow), Feb. 1957, 16-20).  
 From experiments on the effect of particle size on coal dust explosions, graphs  
 were obtained showing the decrease of intensity with particle size; and for  
 peat, brown coal and bituminous coal, limiting particle sizes, above which an  
 explosion would not take place, were determined. Moisture was shown to  
 decrease the possibility of an explosion and limiting moisture contents for  
 various solid fuels were obtained. Addition of a small amount of ash to peat  
 was found to increase the ignition time and decrease the intensity of an  
 explosion. Investigations on the effect of oxygen on the explosibility of  
 dust, showed that with a lower oxygen concentration in the air there was less  
 likelihood of an explosion, but at the lower limits the starting of an explosion  
 mostly depends on the amount of volatiles given off by the fuel. The effect  
 of added carbon dioxide and of air temperature on the pressure produced by the  
 explosion was also determined. (L)

SHADALOVA, S. L., BERNSTEYN, R. S., POMERANTSEV, V. V.,

"On the Mechanism of Resistance and Heat Loss in Clusters of Pipes," p 251, Aerodynamic and Heat Transfer Problems in Boiler and Furnace Processes; A Collection of Articles, Moscow, Gosenergoizdat, Moscow, 1958. 329 p.

Purpose: The book is intended for engineers and combustion specialists concerned with design and operation of heating equipment and it is also for scientific workers and students of vtuzes.

"Generalized Calculation Method for Aerodynamic Resistance of Filled Cross Sections, Ibid. p. 267

10.2000

68271

SOV/81-59-10-35116

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 254 (USSR)

AUTHORS: Bernshteyn, R.S., Pomerantsev, V.V., Shagalova, S.L.

TITLE: The Problem of the Mechanism of Resistance and Heat Emission in Pipe Bundles

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protsesakh. Moscow - Leningrad, Gosenergoizdat, 1958, pp 251-267

ABSTRACT: The distribution of the pressures and the coefficients of heat emission over the surface of porous pipes of 28 mm in diameter with air flowing around them in the case of artificial moistening of the pipe material have been investigated. The experiments were carried out in an aerodynamic pipe at stationary heat and hydrodynamic conditions with three pipe bundles arranged in the corridor type with the ratio of the steps  $S_1/d = S_2/d = 1.13$ ;  $S_1/d = 1.13$  and  $S_2/d = 2.26$ ;  $S_1/d = 2.26$  and  $S_2/d = 1.13$  and also with two pipe bundles arranged in the chessboard order with the ratio of the steps  $S_1/d = S_2/d = 1.2$ ;  $S_1/d = 2.26$  and  $S_2/d = 1.13$  within the range of the Re criterion 100 - 50,000. Based on the found fields of pressures and coefficients of heat emission on the surface of the pipes it has been shown that between the pipes of one and the same row a jet flow takes place; in the free section

Card 1/2

68271

SOV/81-59-10-35116

The Problem of the Mechanism of Resistance and Heat Emission in Pipe Bundles

between two adjacent rows of the bundle the character of the flow is similar to the character of a jet outflowing into an infinite filled space. It has also been established that a considerable effect on the distribution of the coefficients of heat emission on the circumference of the pipes is exercised by the change in the step of the bundle  $S_1/d$ . It has been noted that the first row shows the principal turbulizing action on the gas flow.

R. Artym

Card 2/2

SOV/81-59-8-27676

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 306 (USSR)

AUTHORS: Bernshteyn, R.S., Pomerantsev, V.V., Shagalova, S.L.


TITLE: A Generalized Method for Calculating the Aerodynamic Resistance of Constrained Cross Sections

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protsessakh. Moscow-Leningrad, Gosenergoizdat, 1958, pp 267 - 289

ABSTRACT: Equations have been cited for calculating the hydraulic resistance for pipe bundles in the corridor and chessboard pattern arrangement of the pipes, as well as for the layer of lump- and ball-shaped particles, which are applicable to technical calculations.

V. Gertsovskiy

Card 1/1



SOV/96-58-11-6/21

AUTHOR: Pomerantsev, V.V., Doctor of Technical Science  
Shakulova, S.L., Candidate of Technical Science  
Aref'yev, A.M., Engineer

TITLE: An Approximate Method of Calculating the Combustion  
of a Pulverised Fuel Flame (Priblizhennaya metodika  
rascheta vygoraniya pyleugol'nogo fakela)

PERIODICAL: Teploenergetika 1958, Nr 11, pp 33-41 (USSR)

ABSTRACT: Previous work has established that the volatiles and  
coke burn simultaneously in the early stages of  
combustion of natural fuel. In fuel pulverised to  
100 microns, the quantity of coke burned during the  
time of simultaneous burning of volatiles and coke  
is about 65 - 75%. As will be seen from Fig.1, the  
remaining coke burns very slowly and as the  
combustion time of the volatiles is so much less,  
the total burning time of the fuel is mainly  
governed by burning of the coke. For the purposes  
of mathematical analysis the simplifying assumptions  
are made that the pulverised fuel flame flows only  
forward and is of uniform section; also that the  
coke is ashless and the velocity and temperature

Card 1/7



SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

of the fuel particles are the same as the mean velocity and temperature of the gas. Tests show that these assumptions are valid for particles of up to 300 microns. The fundamentals of the calculation are explained in previously published articles and formulae are given for the combustion time of a particle of given size. On the basis of the equations that are derived, the condition of the flame at any given instant of time after a fuel particle enters the furnace is considered. Calculations are made of the quantity of fuel burning in a given time, the oxygen consumption, the oxygen concentration in the torch and the fuel particle size distribution. Finally a general solution is obtained from which are derived formulae for calculating the combustion of fuel dust in the diffusion and kinetic regions. For convenience of calculation, nomograms are constructed for equations 13, 21 and 22; these are given in Fig.4. These nomograms may be used to determine the combustion

Card 2/7

SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

time of the flame provided that the elementary and fractional composition of the coal particles, the calorific value of the fuel, the kinetic constants of the coke, the amount of mechanically-incomplete combustion, the excess-air factor and the mean temperature in the furnace chamber are given. The nomograms can also serve to determine the amount of mechanically-incomplete combustion after the torch has burned for a given time and to indicate the best furnace conditions. They are likewise useful in comparing operation of various furnace arrangements and to solve a number of other problems. However, sufficient data is not available on the reaction characteristics of natural fuel. Therefore, the nomograms were first used to determine the combustion constants from data obtained during heat balance tests on industrial furnaces. The mean flame temperature enters into the calculation and the determination of this temperature is next considered.

Card 3/7

SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

An empirical formula for the temperature change over the length of the flame is given. The position of maximum temperature under various conditions is discussed. Several methods have been proposed to determine the mean temperature but they are not sufficiently in accord with combustion conditions. An expression is given for the determination of the mean temperature. By successive numerical integration of one side of this expression with subsequent determination of the mean temperature, graphs were constructed for the mean temperature of the flame. These are given in Fig.5. Practical test data are then analysed. The method of calculation described above was used to work out test results on a number of industrial furnaces in order to determine the combustion-rate constants for cokes of natural fuels. It was assumed that the mean particle velocity is the same as the gas velocity and that particles do not re-circulate. Forty series of industrial tests, totalling about 600 sets of

Card 4/7

SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

results of tests on different types of furnace, were analysed. The fuels involved range from anthracite to lignite. The test data adequately covers the range of conditions encountered in industrial furnaces. The results are plotted in Fig.6. as the relationship between the logarithm of the apparent reaction-speed constant and the reciprocal of the absolute temperature. The values of the apparent kinetic combustion constants for any given fuel are grouped round a straight line with a maximum scatter of + 60% from the mean. Individual test results in which the burners were working irregularly are excluded. Provided combustion is normal, the values of the apparent constants for any given fuel are practically independent of burner construction and arrangement because in modern furnaces with long flames the initial mixing conditions influence only the stability of ignition. Because it was assumed

Card 5/7

SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

that the flame flows only forward the constants determined are not universally applicable but they can be used for combustion calculations on furnace chambers of the type here analysed. Further test data must be worked out for various industrial furnaces and rigs so that the influence of aerodynamic factors can be assessed and the values of more generally applicable constants determined. Comparison between the test data and laboratory data given in Fig.7. shows that in both cases the values of the constants are of the same order. Therefore, very extensive data obtained with different furnaces and different kinds of fuel have confirmed the general validity of the given method of analysing combustion. The accompanying methods of calculation, including the nomogram, can be used for quantitative evaluation of the behaviour of the combustion process under particular conditions in a given furnace. They can be used

Card 6/7

SOV/96-58-11-6/21

An Approximate Method of Calculating the Combustion of a  
Pulverised Fuel Flame

to compare the operation of furnaces and to determine  
the influence of various factors on the rate of fuel  
consumption and also to compare different methods  
of burning fuel. There are 7 figures, 1 table and  
9 Soviet references.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut  
(Central Boiler Turbine Institute)

Card 7/7

S/196/61/000/006/012/014  
E194/E435

AUTHORS: Pomerantsev, V.V., Shagalova, S.L., Aref'yev, K.M.  
TITLE: Analysis and calculation of the combustion of a pulverized fuel flame  
PERIODICAL: Referativnyy zhurnal. Elektrotehnika i energetika, 1961, No.6, p.10, abstract 6G62. (Sb. 3-e Vses. soveshchaniye po teorii goreniya. T.2., M., 1960, pp.158-160)

TEXT: Existing procedures for calculating the combustion of coal dust have not been used in engineering practice. New efforts in this direction have been undertaken in the TsKTI (Central Boiler and Turbine Institute). The procedure is based on solving the problem of combustion of a pulverized fuel flame which is of uniform particle size distribution across the section. The solution allows for the combined influence on the process of kinetic and diffusion factors and also allows for varying concentration and approximately for the temperature distribution in the flame. The main assumptions are: (1) the speed and temperature of the fuel particles are assumed to be the same as those of the gas flow in which they are carried; (2) when the fuel is milled the ash is

Card 1/2

SHAGALOVA, S.L., kand.tekhn.nauk; AREF'YEV, K.M., inzh.

Analyzing the effects of operating conditions parameters  
on the magnitude of mechanical underfiring in compartment  
furnaces. Teploenergetika 7 no.2:41-47 P '60.

(MIRA 13:5)

1. TSentral'nyy kotloturbinnyy institut.  
(Furnaces)